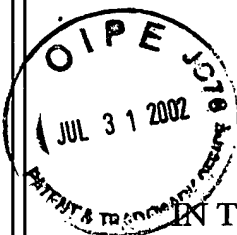


2232-163
GEK:krb



#4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)
G. DANILOFF *et al.*)
Serial No. 10/028,331)
Filed: December 28, 2001)
For: DETECTION OF ANALYTES)

Group Art Unit: 1641

RECEIVED

AUG 01 2002

TECH CENTER 1600/2900

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Under the provisions of 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicant submits herewith copies of publications that the Office may wish to consider in examination of the subject application. The publications are listed on the attached form PTO-1449.

Respectfully submitted,

By

Glenn E. Karta
Attorney for Applicants
Registration No. 30,649
ROTHWELL, FIGG, ERNST & MANBECK, p.c.
Suite 800, 1425 K Street, N.W.
Washington, D.C. 20005
Telephone: (202)783-6040



**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

Complete if Known

Application Number	10/028,331
Filing Date	December 28, 2001
First Named Inventor	G. DANILOFF
Group Art Unit	1641
Examiner Name	

RECEIVED

AUG 01 2002

Sheet

1

of

5

Attorney Docket Number

2232-163

TECH CENTER 1600/2900

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code (if known)		
		5,517,313		Colvin, Jr.	05/14/1996
		5,894,351		Colvin, Jr.	04/13/1999
		5,910,661		Colvin, Jr.	06/08/1999
		5,917,605		Colvin, Jr.	06/29/1999
		5,503,770		James et al.	04/02/1996
		5,763,238		James et al.	06/09/1998
		4,329,461		Khanna et al.	05/11/1982
		5,833,603		Kovacs et al.	11/10/1998
		5,512,246		Russell et al.	04/30/1996
		6,011,984		Van Antwerp et al.	01/04/2000
		6,002,954		Van Antwerp et al.	12/14/1999

FOREIGN PATENT DOCUMENTS


Examiner Initials*	Cite No.	Foreign Patent Document			Name of Patentee of Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T ⁶
		Office Code	Number	Kind (if known)			
		WO	99/46600	A1	Sensors for Medicine and Science, Inc.	09/16/1999	

Examiner
Signature

Date
Considered

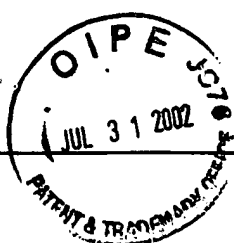
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code. ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached. AB indicates that only an English language abstract is attached.

 INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	10/028,331
				Filing Date	December 28, 2001
				First Named Inventor	G. DANILOFF
				Group Art Unit	1641
Examiner Name					
Sheet	2	of	5	Attorney Docket Number	2232-163
OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			T ⁶
		APPLETON, B. et al., "Detection of Total Sugar Concentration Using Photoinduced Electron Transfer Materials: Development of Operationally Stable, Reusable Optical Errors", <i>Sensors and Actuators</i> , B 65, 2000, pp. 302-304			
		BARKER, S. et al., "The Interaction of Areneboronic Acids with Monosaccharides", <i>Carbohydrate Research</i> , 1973, Vol. 26, pp. 33-40			
		BURNETT, T. et al., "Synthesis of A Fluorescent Boronic Acid Which Reversibly Binds to Cell Walls and A Diboronic Acid Which Agglutinates Erythrocytes", <i>Biochem. and Biophys. Res. Comm.</i> , 96:1 (1980), pp. 157-162			
		CATLIN, J., "Synthesis, Reactions, and Mass Spectral Studies of Some Cyclic Amine-Boranes and Their Catechol Derivatives", <i>J. Org. Chem.</i> , 1969, Vol. 34, No. 6, pp. 1664-1668			
		COOPER, C. et al., "Selective D-glucosamine Hydrochloride Fluorescence Signalling Based on Ammonium Cation and Diol Recognition", <i>Chem. Commun.</i> , 1997, pp. 1419-1420			
		CZARNIK, A., "Chemical Communication in Water Using Fluorescent Chemosensors", <i>Acc. Chem. Res.</i> , 1994, Vol. 27, pp. 302-308			
		DAVIS, C. et al., "Simple and Rapid Visual Sensing of Saccharides", <i>Org. Lett.</i> , 1:2, 1999, pp. 331-334			
		DEETZ, M. et al., "Heteroditopic Ruthenium (II) Bipyridyl Receptor with Adjacent Saccharide and Phosphate Binding Sites", <i>Tetrahedron Letters</i> , 1998, Vol. 39, pp.6841-44			
		EGGERT, H. et al., "A New Glucose-Selective Fluorescent Bisboronic Acid. First Report of Strong α -Furanose Complexation in Aqueous Solution at Physiological pH", <i>J. Org. Chem.</i> , 1999, Vol. 64, pp. 3846-52			
		FRIEDMAN, S. et al., "Complexation of Phenylboronic Acid with Lactic Acid. Stability Constant and Reaction Kinetics", <i>Jour. of the Amer. Chemical Soc.</i> , 1974, 96:17, pp. 5381-5384			
		GLASS, T., "Cooperative Chemical Sensing with Bis-tritylacetylenes: Pinwheel Receptors with metal Ion Recognition Properties", <i>J. Am. Chem. Soc.</i> , 2000, Vol. 122, pp. 4522-4523			
		ISHI-I, T., et al., "Structure Determination of a 1:2 Threitol-Boronic Acid Complex: Comments on the Structural Controversy between 5,5- and 6,6-Membered Rings", <i>Tetrahedron</i> , 1998, Vol. 54, pp. 8679-86			
		ISHI-I, T., et al., "D/L Selective Re-binding of Saccharide-Imprinted [60]Fullerene-Bisadducts Based on a Saccharide-Boronic Acid Interaction: Development of a Molecular Imprinting Technique Useful in a Homogeneous System", <i>Tetrahedron</i> , 1999, Vol. 55, pp. 3883-92			
		JAMES, T., et al., "Fluorescent Saccharide Receptors: A Sweet Solution to the Design, Assembly and Evaluation of Boronic Acid Derived PET Sensors", <i>Chem. Comm.</i> , 1996, pp. 1-21			
Examiner Signature				Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.



INFORMATION DISCLOSURE STATEMENT BY APPLICANT

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	10/028,331
				Filing Date	December 28, 2001
				First Named Inventor	G. DANILOFF
				Group Art Unit	1641
				Examiner Name	
Sheet	3	of	5	Attorney Docket Number	2232-163
OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			T ⁶
		JAMES, T., et al., "A Glucose-Selective Molecular Fluorescence Sensor", <i>Angew Chem. Int. Ed. Eng.</i> , 1994, Vol. 33, pp. 2207-09			
		JAMES, T., et al., "Novel Photo induced Electron-Transfer Sensor Saccharides Based on the Interaction of Boronic Acid and Amine", <i>J. Chem. Soc., Chem. Commun.</i> , 1994, pp. 477-78			
		JAMES, T., et al., "Novel Saccharide-Photoinduced Electron Transfer Sensors Based on the Interaction of Boronic Acid and Amine", <i>J. Am. Chem. Soc.</i> , 1995, Vol. 117, No. 35, pp. 8982-87			
		JAMES, T., et al., "Saccharide Sensing with Molecular Receptors Based on Boronic Acid", <i>Angew Chem. Int. Ed. Engl.</i> , 1996, Vol. 35, pp. 1911-22			
		JAMES, T. et al., "Chiral Discrimination of Monosaccharides Using a Fluorescent Molecular Sensor", <i>Letters to Nature</i> , Nature, 1995, Vol. 374, pp. 345-347			
		KATAOKA, K., et al., "Novel Sensing System for Glucose Based on the Complex Formation Between Phenylborate and Fluorescent Diol Compounds", <i>J. Biochem.</i> , 1995, Vol. 117, pp. 1145-1147			
		LAVIGNE, J., et al., "Teaching Old Indicators New Tricks: A Colorimetric Chemosensing Ensemble for Tartrate/Malate in Beverages", <i>Angew. Chem. Int. Ed.</i> , 1999, Vol. 38, No. 24, pp. 3666-3669			
		LI, J. et al., "A Highly Sensitive and Selective Catalytic DNA Biosensor for Lead Ions", <i>J. Am. Chem. Soc.</i> , 2000, Vol. 122, pp. 10466-10467			
		LINNANE, P. et al., "A Sweet Toothed Saccharide (PET) Sensor", <i>Tetrahedron Letters</i> , 1995, Vol. 36, No. 48, pp. 8833-8834			
		MIZUNO, T. et al., "Re-Investigation of Optical Sensing Properties of Boronic-Acid-Appended Re Complexes for Saccharides", <i>J. Chem. Soc. Perkin Trans.</i> , 2000, Vol. 1, pp. 407-13			
		MIZUNO, T. et al., "Sugar Sensing Using Chiral Salen-Co(II) Complexes", <i>Tetrahedron</i> , 1999, Vol. 55, pp. 9455-68			
		MURAKAMI, H. et al., "Sugar Sensing Utilizing Aggregation Properties of Boronic-Acid -Appended Porphyrins and Metalloporphyrins", <i>J. Chem. Soc. Perkin Trans. 2</i> , 1994, pp. 975-981			
		NAKASHIMA, K., et al., "Diaza-18-Crown-6-Based Saccharide Receptor Bearing Two Boronic Acids. Possible Communication Between Bound Saccharides and Metal Cations", <i>Ind. Eng. Chem. Res.</i> , 2000, Vol. 39, pp. 3479-83			
		NORRILD, J., et al., "Evidence for Mono- and Bidentate Boronate Complexes of Glucose in the Furanose Form. Application of J _{C-C} Coupling Constants as a Structural Probe", <i>J. Am. Chem. Soc.</i> , 1995, Vol. 117, pp. 1479-84			
Examiner Signature				Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.



**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

Complete if Known

Application Number	10/028,331
Filing Date	December 28, 2001
First Named Inventor	G. DANILOFF
Group Art Unit	1641
Examiner Name	

RECEIVED

AUG 01 2002

TECH CENTER 1600/2900

Sheet

4

of

5

Attorney Docket Number

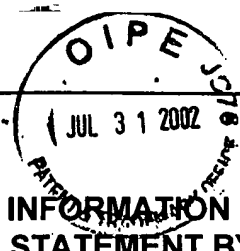
2232-163

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ⁶
		OJADI, E., <i>et al.</i> , "Properties of Porphyrin Dimers, Formed by Pairing Cationic and Anionic Porphyrins", <i>J. Am. Chem. Soc.</i> , 1985, Vol. 107, pp. 7783-7784	
		PIZER, R., <i>et al.</i> , "Mechanism of the Complexation of Boron Acids with Catechol and Substituted Catechols", <i>Inorganic Chemistry</i> , 1977, Vol. 16, No. 7, pp. 1677-1681	
		ROLINSKI, O. <i>et al.</i> , "A Fluorescence Lifetime Sensor for Cu(I) Ions", <i>Meas. Sci. Technol.</i> , 1999, Vol. 10, pp. 127-136	
		SANDANAYAKE, K. <i>et al.</i> , "Molecular Fluorescence Sensor for Saccharides Based on Amino Coumarin", <i>Chemistry Letters</i> , 1995, pp. 139-140	
		SANDANAYAKE, K. <i>et al.</i> , "Two Dimensional Photoinduced Electron Transfer (PET) Fluorescence Sensor for Saccharides", <i>Chemistry Letters</i> , 1995, pp. 503-504	
		SHIINO, D. <i>et al.</i> , "Amine Effect on Phenylboronic Acid Complex with Glucose Under Physiological pH in Aqueous Solution", <i>J. Biomater. Sci. Polymer Edn</i> , 1996, Vol. 7, No. 8, pp. 697-705	
		SHINKAI, S. <i>et al.</i> , "Molecular Design of Artificial Sugar Sensing Systems", <i>Trends in Analytical Chemistry</i> , 1996, Vol. 15, No. 5, pp. 418-424	
		SHINKAI, S., "Aqueous Sugar Sensing by Boronic-Acid-Based Artificial Receptors", <i>Chemosensors of Ion and Molecule Recognition</i> , 1997, pp. 37-59	
		SHINMORI, H. <i>et al.</i> , "Spectroscopic Sugar Sensing By A Stilbene Derivative with Push (Me ₂ N-)-Pull ((HO) ₂ B-)- Type Substituents", <i>Tetrahedron</i> , 1995, Vol. 51, No. 7, pp. 1893-1902	
		SHINMORI, H., <i>et al.</i> , "A Novel Light-Gated Sugar Receptor, Which Shows High Glucose Selectivity", <i>J. Chem. Soc., Perkin Trans.</i> , 1998, Vol. 2, pp. 847-52	
		SHIOMI, Y., <i>et al.</i> , "Specific Complexation of Glucose with a Diphenylmethane-3,3'-Dioboronic Acid Derivative: Correlation Between the Absolute Configuration of Mono- and Di-Saccharides and the Circular Dichroic Activity of the Complex", <i>J. Chem. Soc. Perkin Trans.</i> , 1993, Vol. 1, pp. 2111-17	
		SUN, W. <i>et al.</i> , "Synthesis of Fluorinated Fluoresceins", <i>J. Org. Chem.</i> , 1997, Vol. 62, pp. 6469-6475	
		SUN, W. <i>et al.</i> , "Synthesis of Novel Fluorinated Coumarins: Excellent UV-Light Excitable Fluorescent Dyes", <i>Bioorganic & Medicinal Chemistry Letters</i> 8, 1998, pp. 3107-3110	
		TAKEUCHI, M., <i>et al.</i> , "Fluorescence and CD Spectroscopic Sugar Sensing by a Cyanine-Appended Diboronic Acid Probe", <i>Tetrahedron</i> , 1996, Vol. 52, No. 4, pp. 1195-1204	
Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.



**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

Complete if Known

Application Number	10/028,331
Filing Date	December 28, 2001
First Named Inventor	G. DANILOFF
Group Art Unit	1641
Examiner Name	

RECEIVED

AUG 01 2002

TECH CENTER 1600/2900

Sheet

5

of

5

Attorney Docket Number

2232-163

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ⁶
		TAKEUCHI, M., et al., "Molecular Design of Highly Selective and Sensitive "Sugars Tweezers" from Boronic Acid-Appended μ -Oxo-bis[porphinatoiron (III)]s, 1998, <i>Bull. Chem. Soc. Jpn.</i> , 1998, Vol. 71, pp. 1117-23	
		TAKEUCHI, M. et al., "Fluorescent Sensing of Uronic Acids Based on a Cooperative Action of Boronic Acid and Metal Chelate", <i>Chem. Commun.</i> , 1997, pp. 1731-1732	
		TRAN-THI, T. et al., "Subpicosecond Excitation of Strongly Coupled Porphyrin-Phthalocyanine Mixed Dimers", <i>J. Chem. Soc. Faraday Trans.</i> , 1992, Vol. 88, pp. 2129-2137	
		TSUKAGOSHI, K., et al., "Specific Complexation with Mono- and Disaccharides that can be Detected by Circular Dichroism", <i>J. Org. Chem.</i> , 1991, Vol. 56, pp. 4089-91	
		TYAGI, S. et al., "Multicolor Molecular Beacons for Allele Discrimination", <i>Nature Biotechnology</i> , 1998, Vol. 16, pp. 49-53	
		UGGLA, R., et al., "Diphenylmethane 3,3'-Diboronic Acid as a Model of Molecular Sensors for Sugars. Recognition of Glucose in a Furanose or Pyranose Form?", <i>Acta Chemica Scandinavica</i> , 1999, Vol. 53, pp. 34-40	
		VOSS, W. et al., "Detection of Protease Activity Using A Fluorescence-Enhancement Globular Substrate", <i>Research Reports from Biotechniques</i> , 1996, Vol. 20, pp. 286-291	
		WISKUR, S. et al., "pK _a Values and Geometries of Secondary and Tertiary Amines Complexed to Boronic Acids - Implications for Sensor Design", <i>Org. Lett.</i> , 0:0, A-D, April 6, 2001	
		YAM, V., et al., "Synthesis and Optical Sensing Properties of a Boronic Acid Appended Rhenium(I) Complex for Sugar", <i>Chem. Commun.</i> , 1998, pp. 109-110	
		YOON, J., et al., "Fluorescent Chemosensing of Catechol and Catecholamines in Water", <i>Bioorganic & Medicinal Chemistry</i> , 1993, Vol. 1, No. 4, pp. 267-71	
		YOON, J., et al., "Fluorescent Chemosensors of Carbohydrates. A Means of Chemically Communicating the Binding of Polyols in Water Based on Chelation-Enhanced Quenching", <i>J. Am. Chem. Soc.</i> , 1992, Vol. 114, pp. 5874-75	
Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²Applicant is to place a check mark here if English language Translation is attached.